

Notice of Allowability

Application No.

10/802,341

Examiner

Mark Kopec

Applicant(s)

HSU ET AL.

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amend filed 08/27/07 and Int. Summ. of 11/7/07.
2. ☒ The allowed claim(s) is/are 20-28, 30-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Mark Kopec
Primary Examiner

Continuation of Substance of Interview including description of the general nature of what was discussed: The examiner/applicant discussed the pending rejections. Specifically, the use of catalyst/oxidizing agents combinations are known (e.g. redox pair EP 1061530). Accordingly, the instant process claims were amended to recite the addition of a co-acid. See Reasons for Allowance. Also, dependent claims 23, 24, 27 and 28 were corrected to comply with 37 C.F.R. §1.75(c)

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In claim **20**, line 4, delete "catalyst" and replace with --co-acid--.

In claim **22**, line 2, delete "co-acid" and replace with --catalyst--.

In claim **23**, line 1, change "and 22" to --or 22--.

In claim **24**, line 1, change "and 22" to --or 22--.

In claim **27**, line 1, change "and 22" to --or 22--.

In claim **28**, line 1, change "and 22" to --or 22--.

Cancel non-elected claims **1-19**.

Authorization for this examiner's amendment was given in a telephone interview with Mr. John Lamming on 11/07/07.

The following is an examiner's statement of reasons for allowance:

The Terminal Disclaimer filed 06/18/07 is entered.

Initially, applicant's definition of "colloid-forming" polymeric acid" at page 7 of the specification is noted.

Pickup discloses chemical synthesis of conducting polymer/polyanion composites (Abstract). The reference specifically discloses polymerization of pyrrole monomer in the presence of Nafion dopant (CH₃CN/H₂O solvent) using Fe oxidant (see Experimental section and Tables 1-2).

Ohtani discloses conducting organic polymer battery is disclosed, which comprises a cathode comprising a conducting organic polymer doped with a polymer anion having a number of anionic groups in the molecule thereof, an anode comprising a metal having a redox potential lower than that of the conducting organic polymer, and an electrolyte solution or a solid electrolyte as an ion conductive phase (Abstract). The conducting organic polymer comprising a composite of the p-type conducting organic polymer and the polymer anion as a dopant can be obtained by conventional methods as described, e.g., Chem.

Lett., Vol. 1986, 687 and JP-A-59-98165, in which the above-described polymer anion (NAFION) is dissolved in a solution of a monomer capable of forming the conducting organic polymer (pyrrole) and the monomer is oxidatively polymerized in the solution. The manner of oxidative polymerization is not particularly restricted and can be selected appropriately from electrolytic oxidation, chemical oxidation and photo-oxidation. In more detail, the conducting organic polymer doped with the polymer anion can be obtained effectively by a method comprising, dissolving the monomer in an electrolyte solution having dissolved therein, for example, a salt comprising a polymer anion and its counter cation or only an acid-type polymer anion, and subjecting the monomer to electrolytic oxidative polymerization in the solution; a method comprising dispersing or dissolving an oxidizing agent which forms no anion species after being reduced, e.g., manganese dioxide, a bichromate, etc., in a solution, mixing the resulting solution with a solution having dissolved therein an acid-type polymer anion and the monomer, and subjecting the monomer to chemical oxidative polymerization; a method comprising mixing ferric hydroxide, an acid type polymer anion, and the monomer in a solution, and

subjecting to chemical oxidative polymerization; or the like technique (Col 3, lines 37-66).

The prior art does not disclose or fairly suggest the instantly recited process wherein pyrrole monomer, colloid-forming polymeric acid, oxidant and co-acid are polymerized in water (or mixed solvent).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


/Mark Kopec/
Primary Examiner
Art Unit 1796

MK
November 7, 2007